

In the claims:

Claim 21 (currently amended): A method for detecting a lung cancer cell, comprising:

contacting a sample suspected of containing the lung cancer cell with an agent that specifically binds to a gene product produced from a polynucleotide comprising a polynucleotide sequence obtained by identification of larger fragment or full-length coding sequence selected from the group consisting of SEQ ID NOS: 24 to 26, 29, 32 to 35 or 38, and

detecting any agent:gene product [peptide] complex so formed, thereby detecting a lung cancer cell.

Claim 30 (new): A method for claim 21, wherein the gene product is a peptide.

Claim 31 (new): A method for claim 21, wherein the gene product is a transcript.

Claim 32 (new): A method for detecting a lung cancer cell, comprising:

contacting a sample suspected of containing the lung cancer cell with an agent that specifically binds to a gene product produced from a polynucleotide, wherein said polynucleotide comprises a SAGE tag as shown in SEQ ID NOS: 24 to 26, 29, 32 to 35 or 38, wherein the SAGE tag is located adjacent to a NlaIII restriction enzyme site and wherein there are no NlaIII restriction enzyme sites further 3' than said site, and

detecting any agent:gene product complex so formed, thereby detecting a lung cancer cell.

Claim 33 (new): A method for claim 32, wherein the gene product is a peptide.

Claim 34 (new): A method for claim 32, wherein the gene product is a transcript.

Claim 35 (new): The method for claim 32, wherein the agent is a monoclonal antibody.

Claim 36 (new): A method for detecting a lung cancer cell, comprising:

contacting a sample suspected of containing the lung cancer cell with an agent that specifically binds to a gene product produced from a polynucleotide over-represented in the lung cancer cell and not in the normal lung cell, wherein said polynucleotide comprises the SAGE tag as shown in SEQ ID NOS: 24 to 26, 29, 32 to 35 or 38, wherein said SAGE tag is located adjacent to a NlaIII restriction enzyme site and wherein there are no NlaIII restriction enzyme sites further 3' than said site, and

detecting any agent:gene product complexes so formed wherein the presence of said complex indicates the presence of a cell expressing said gene product, thereby detecting a lung cancer cell in said sample.

Claim 37 (new): A method for claim 36, wherein the gene product is a peptide.

Claim 38 (new): A method for claim 36, wherein the gene product is a transcript.

Claim 39 (new): The method for claim 36, wherein the agent is a monoclonal antibody.

Claim 40 (new): A method for detecting a lung cancer cell, comprising:

contacting a sample suspected of containing the lung cancer cell with an agent that specifically binds to a gene product produced from a polynucleotide over-represented in the lung cancer cell and not in the normal lung cell, wherein said polynucleotide comprises the SAGE tag as shown in SEQ ID NOS: 24 to 26, 29, 32 to 35 or 38, wherein said SAGE tag is located adjacent to a NlaIII restriction enzyme site and wherein there are no NlaIII restriction enzyme sites further 3' than said site, and

contacting a control sample not containing the lung cancer cell with an agent that specifically binds to a gene product produced from a polynucleotide over-represented in the lung cancer cell and not in the normal lung cell, wherein said polynucleotide comprises the SAGE tag as shown in SEQ ID NOS: 24 to 26, 29,

32 to 35 or 38, wherein said SAGE tag is located adjacent to a NlaIII restriction enzyme site and wherein there are no NlaIII restriction enzyme sites further 3' than said site, and

detecting any agent:gene product complexes so formed wherein the presence of said complex in sample but not in control sample indicates the presence of a cell expressing said gene product in sample, thereby detecting a lung cancer cell in said sample.

41. (new) A method for claim 40, wherein the gene product is a peptide.
42. (new) A method for claim 40, wherein the gene product is a transcript.
43. (new) The method for claim 40, wherein the agent is a monoclonal antibody.